

Notice of Allowability

Application No.

10/775,012

Applicant(s)

DALY ET AL.

Examiner

Art Unit

Hau H. Nguyen

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/30/2006.
2. ☒ The allowed claim(s) is/are 1-3.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Kee M. Tung
Primary Examiner

Allowable Subject Matter

1. Claims 1-3 are allowed.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

The prior art taken singly or in combination does not teach or suggest, method for creating an image dither pattern structure, among other things, comprising:

establishing a first multi-dimensional array of image dither pattern tiles, said array comprising *a first upper horizontal spatial frequency bound, a first lower horizontal spatial frequency bound, a first upper vertical spatial frequency bound, a first lower vertical spatial frequency bound, a first upper temporal frequency bound and a first lower temporal frequency bound; wherein said spatial frequency bounds and said temporal frequency bounds define a high-pass pattern configuration;*

establishing a second multi-dimensional array of image dither pattern tiles, said array comprising *a second upper horizontal spatial frequency bound, a second lower horizontal spatial frequency bound, a second upper vertical spatial frequency bound, a second lower vertical spatial frequency bound, a second upper temporal frequency bound and a second lower temporal frequency bound; wherein said second lower temporal frequency bound is lower than said first lower temporal frequency bound.*

The references to Spaulding et al. (U.S. Patent No. 6,091,849) and Doherty et al. (U.S. Patent No. 6,795,085) are made of records as disclosing related creating dither pattern structure.

The closest prior art, Spaulding et al. teaches a method of providing a matrix of dither values for each color channel of the digital color image wherein two or more of the matrices of

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dither values are designed jointly to minimize a visual cost function utilizing spatial frequencies; associated a first dither matrix with a first range of image characteristic values; and associated a second dither matrix with a second range of image characteristic values. Doherty et al. teach a dithering method of reducing contour by generating dither array utilizing both spatial and temporal frequencies.

However, references Spaulding et al. and Doherty et al. neither teach the frequency bounds nor define the high-pass pattern configuration as specified in the claims.

Conclusion

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 571-272-7787. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794.

The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

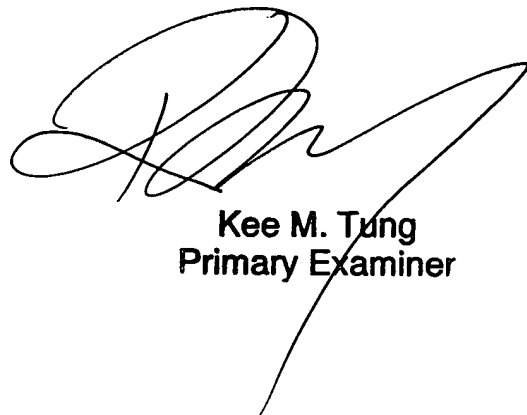
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

H. Nguyen

4/13/2006



Kee M. Tung
Primary Examiner